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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Jianbo Lu

Serial No.: 10/735,133

Group Art Unit: 3661

Filed: December 12, 2003

Examiner: Beaulieu, Yonel

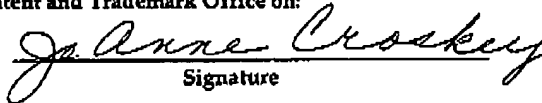
Title: ROLL STABILITY CONTROL SYSTEM FOR AN  
AUTOMOTIVE VEHICLE USING COORDINATED CONTROL  
OF ANTI-ROLL BAR AND BRAKES

Atty. Docket No.: 81093041

I hereby certify that this correspondence is being transmitted via facsimile (571-273-8300) to  
Examiner Yonel Beaulieu with the United States Patent and Trademark Office on:

August 11, 2006  
Date of Deposit

Jo Anne Croskey

  
Signature

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop AF  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Dear Examiner:

The Applicant, respectfully, requests a Pre-Appeal Brief Request for Review in view of improper rejections based upon error(s) in fact and based upon essential element(s) required to establish a *prima facie* rejection. This Request is submitted along with a Notice of Appeal.

In the Final Office Action dated June 15, 2006, claims 1-21 are pending. Claims 19-21 stand allowed. Claims 6, 13, 16, and 18 stand allowed if rewritten independent form. Claims 1-5, 7-12, 14-15, and 17 stand rejected. Of the rejected claims, claims 1, 8, 12, and 15 are independent claims. Claims 2-5, 7, 9-11, 14, and 17 depend, respectively, from claims 1, 8, 12, and 15.

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The Final Office Action states that claims 1-5, 7-12, 14-15, and 17 stand rejected under 35 U.S.C. 102(b) as being anticipated by Okamoto (U.S. Pat. No. 4,886,291). The Examiner relies on Figure 15, col. 3, lines 12-18, and col. 4, lines 4-15 of Okamoto for such rejection.

As previously stated, claim 1 recites a roll stability control system for an automotive vehicle that includes an active anti-roll bar system, a rollover sensing system generating a rollover attitude signal indicative of an impending rollover of the vehicle, and a controller coupled to the active anti-roll bar system and the rollover sensing system. The controller controls the active anti-roll bar to prevent the vehicle from rolling over in response to the roll attitude signal.

Notice that the claimed system is directed to rollover events and the prevention thereof.

Okamoto discloses a suspension control system. The suspension control system is utilized to prevent over-steering characteristics of a vehicle. This is done by stiffening a drive suspension of the vehicle. The suspension is stiffened to improve the driveability or the ride comfort and stability of the vehicle. See col. 1, lines 46-54 and col. 4, lines 4-18 of Okamoto.

Okamoto deals with body roll of the vehicle and not rollover. There is a distinct difference between body roll motion and rollover. Body roll motion is experienced through normal operating conditions, due to, for example, steering, accelerating, or braking of a vehicle. On the other hand, rollover occurs when large roll angles or lateral slip angles are experienced. Note that the system of Okamoto monitors steering wheel angle and vehicle speed and does not determine roll angle or slip angle. Okamoto does not detect a rollover or an impending rollover.

Applicant is unable to find a rollover sensing system or the generation of a rollover attitude signal anywhere in the Okamoto reference. In Figure 15, Okamoto simply discloses the suspension control system. In col. 3, lines 12-18, Okamoto states that Figure 15 discloses a stabilizer and torsional modulus for suppressing rolling motion (body roll motion), or in other words, the

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suspension control system. In col. 4, lines 4-15, Okamoto discloses the monitoring of steering wheel angle and vehicle speed and the stiffening of the suspension in response thereto to provide riding comfort. Applicant submits that steering wheel angle and vehicle speed are not in and of themselves indicative of an impending rollover. A vehicle may experience a large steering angle and be traveling at a high speed and not be in danger of a rollover, depending upon the terrain on which the vehicle is driving. Note that the terms "roll angle", "slip angle", and "attitude" are not used anywhere in the Okamoto reference.

Claim 1 also recites that the controller controls the active anti-roll bar to prevent the vehicle from rolling over in response to the roll attitude signal that is derived from the rollover sensing system. As mentioned above, no rollover sensing system is set forth in the Okamoto reference. Also, there is no teaching or suggestion for preventing the vehicle from rolling over. The Okamoto reference merely controls the rolling motion of the vehicle body relative to the suspension and not the rolling over of the vehicle. Thus, the controller and the system claimed are different and perform a different function than the controller and the system of Okamoto. Therefore, there are several missing elements of Claim 1 from the Okamoto reference.

In order for a reference to anticipate a claim the reference must teach or suggest each and every element of that claim, see MPEP 2131 and *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628. Thus, since Okamoto fails to teach or suggest each and every element of independent claim 1, it is novel, nonobvious, and is in a condition for allowance.

Independent claim 8 recites similar limitations as that of claim 1 and thus is novel, nonobvious, and is in a condition for allowance for at least the same reasons.

Independent claim 12 also recites the limitation of determining a roll attitude signal indicative of an impending rollover of a vehicle and further recites the limitations of controlling an active anti-roll bar system to reduce a rolling moment of the vehicle, when the roll attitude is between a first and

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second threshold, and controlling the active anti-roll bar system and the brake system to reduce a rolling moment of the vehicle when the roll attitude is above a second threshold. These additional limitations are not taught or suggested in Okamoto. The Office Action suggests that these limitations are provided by way of the brake switch 106 of Okamoto. Applicant disagrees and submits that Okamoto does not mention roll attitude and thus clearly does not disclose the evaluation of roll attitude as claimed. The disclosure of a brake switch does not imply roll attitude evaluation and the controlling of an anti-roll bar system and a brake system in response to that evaluation. Applicant can only assume that the Examiner is using improper hindsight reasoning in view of the present application or is improperly taking Official Notice.

Referring to MPEP 2144.03, Official Notice unsupported by documentary evidence should only be taken by the Examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. The notice of facts beyond the record, which may be taken by the Examiner, must be "capable of such instant and unquestionable demonstration as to defy dispute." *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). Applicant submits that the limitations in question are not capable of such instant and unquestionable demonstration as to defy dispute. Specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. *Id.* at 1091, 165 USPQ at 420-21. Any facts so noticed should be of notorious character and serve only to "fill in the gaps" in an insubstantial manner. It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based. *Zurko*, 258 F.3d at 1386, 59USPQ2d at 1697 (Fed. Cir. 2001). The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amendable to the taking of such notice. *In re Eynde*, 480 F.2d 1364, 1370, 178

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USPQ 470, 474 (CCPA 1973). Ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge. General conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection. *Lee*, 277 F.3d at 1344-45, 61 USPQ2d at 1434-35 (Fed. Cir. 2002).

The Examiner must provide specific technical and scientific reasoning to support his or her conclusions of common knowledge. *In re Soli*, 317 F.2d at 946, 37 USPQ at 801 (CCPA 1963). Applicant submits that no specific factual findings or concrete evidence has been put forth nor has any specific technical reasoning been put forth to support the Official Notice taken. To simply state that that the recited limitations are disclosed by way of a brake switch, presupposes at least that a controller is disclosed that is designed to perform that which is claimed, which is simply not the case here. As such, this is not a proper or valid argument that can be used against the Applicant. Also, if the Applicant challenges a factual assertion as not properly officially noticed or not properly based upon common knowledge, the Examiner must support the finding with adequate evidence. See 37 CFR 1.104(c)(2). Again, the Applicant submits that no such evidence has been provided to support a teaching or suggestion of the claimed elements.

Applicant is aware that hindsight reasoning is proper so long as it takes into account only knowledge which was within the level of ordinary skill at the time of the claimed invention was made and does not include knowledge gleaned only from the Applicant's disclosure. Applicant believes that to arrive at a conclusion of obviousness, especially in view of the above relied upon reference, can only be made through the gleaning of knowledge from Applicant's disclosure. For the above-stated reasons claim 12 is also believed to be novel, nonobvious, and in a condition for allowance.

Independent claim 15 recites the limitations of determining a roll angle estimate in response to roll sensing system sensors, controlling a front and

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rear active anti-roll bar in response to the roll angle estimate, and controlling a front and rear brake controller in response to the relative roll angle estimate to provide a predetermined tire force vector. As stated above, Okamoto fails to disclose determining a roll angle or a roll angle estimate. Thus, the control claimed is not taught or suggested in Okamoto.

In addition, Okamoto fails to teach or suggest providing a predetermined tire force vector, let alone, how that tire force vector is provided. The Office Action refers to col. 3, line 54-col. 4, line 18 for such disclosure. Applicant is unable to find anywhere in the stated section or anywhere else in Okamoto the disclosure of a tire force vector. In the stated section, Okamoto describes controlling the dampening of a suspension. The term "tire" or the like is not used anywhere in Okamoto. Note that wheels are different than tires and that the dampening characteristics at the wheels are different then the forces experienced by tires and may not be directly related. Thus, claim 15 is also novel, nonobvious, and is in a condition for allowance.

Since claims 2-5, 7, 9-11, 14, and 17 depend from claims 1, 8, 12, and 15, they are also novel, nonobvious, and are in a condition for allowance for at least the same reasons.

Therefore, Applicant respectfully requests the panel to reverse the Examiner's position with respect to each and every one of the pending claims based upon the errors in fact and the essential elements missing to establish a *prima facie* case. The application is in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Panel Examiners have any questions or comments, they are respectfully requested to contact the undersigned attorney.

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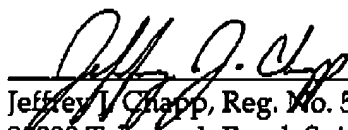
The Commissioner is hereby authorized to charge any additional fees,  
which may be required, or credit any overpayment to Deposit Account No.  
06-1510.

Respectfully submitted,

ARTZ & ARTZ, P.C.

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**AUG 11 2006**

  
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Jeffrey I. Chapp, Reg. No. 50,579  
26333 Telegraph Road, Suite 250  
Southfield, MI 48034  
(248) 223-9500

Dated: August 11, 2006